

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-2-44
Relating to Certification of New Heavy-Duty
Off-Road Equipment Engines

CUMMINS ENGINE COMPANY, INC.

Pursuant to the authority vested in the Air Resources Board by Sections 43000.5, 43013 and 43018 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following Cummins Engine Co., Inc. 1999 model-year engines with rated power between 175 and 750 horsepower and exhaust emission control systems are certified as described below in heavy-duty off-road equipment:

Typical Equipment Usage: Crane, Loader, Tractor, Dozer, Pump, Compressor

Fuel Type: Diesel

<u>Engine Family</u>	<u>Displacement</u>		<u>Exhaust Emission Control Systems and Special Features</u>
	<u>Liters</u>	<u>Cubic Inches</u>	
XCEXL0855AAB (B093)	14.0	855	Charge Air Cooler Turbocharger Electronic Control Module

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The total hydrocarbons (THC), carbon monoxide (CO), nitrogen oxides (NOx), and particulate matter (PM) certification exhaust emission standards in grams per brake horsepower-hour (g/hp-h), and the opacity-of-smoke emission standards in percent (%) during acceleration (Accel), lugging (Lug), and peak (Peak) modes for this engine family are as follows (Title 13, California Code of Regulations, Section 2423):

<u>Exhaust Emissions (g/hp-h)</u>				<u>Smoke Opacity (%)</u>		
<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
1.0	8.5	6.9	0.4	20	15	50

The THC, CO, NOx, and PM exhaust emissions certification values in grams per brake horsepower-hour, and the opacity-of-smoke emissions certification values in percent for this engine family are:

<u>Exhaust Emissions (g/hp-h)</u>				<u>Smoke Opacity (%)</u>		
<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Acce1</u>	<u>Lug</u>	<u>Peak</u>
0.2	0.6	6.5	0.1	19	3	28


BE IT FURTHER RESOLVED: That the listed engine models comply with the "Exhaust Emission Standards and Test Procedures--Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations Section 2423) for the aforementioned model year.

BE IT FURTHER RESOLVED: That the listed engine models also comply with the "Emission Control Labels--1996 and Later Heavy-Duty Off-Road Diesel-Cycle Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year.

BE IT FURTHER RESOLVED: That for the listed engine models the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 et seq.).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed at El Monte, California this 30th day of December 1998.


for R. B. Summerfield, Chief
Mobile Source Operations Division

LARGE ENGINE MODEL SUMMARY

12/5/96

Manufacturer: **Cummins Engine Company**

Process Code: **New Submission**

EPA Engine Family: **XCECL0855AAB**

Manufacturer Family Name: **B093**

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm ³ /stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm ³ /stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
CPL 2261								
FR 1873	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10218	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10085	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10148	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10077	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10078	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10083	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10084	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10086	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10087	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10088	N14-C	525@2100	252	178	1650@1300	304	133	CAC TC, ECM
FR 10237	N14-C	525@1800	289	176	1650@1300	304	133	CAC TC, ECM
FR 10147	N14-C	500@2100	250	171	1650@1300	304	133	CAC TC, ECM
FR 10215	N14-C	440@1800	242	178	1650@1300	304	133	CAC TC, ECM
CPL 2403								
FR 10158	N14-C	480@2100	236	167	1500@1300	276	121	CAC TC, ECM
FR 10157	N14-C	425@2100	209	148	1400@1400	263	124	CAC TC, ECM
FR 10242	N14-C	425@2100	209	148	1400@1400	263	124	CAC TC, ECM
FR 10156	N14-C	360@2100	181	128	1215@1400	231	109	CAC TC, ECM
FR 10241	N14-C	360@2100	181	128	1215@1400	231	109	CAC TC, ECM

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